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AIAA Intelligent Systems Technical Committee

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NASA Stennis Space Center has implemented a pilot operational Integrated System Health Management (ISHM) capability. The implementation was done for the E-2 Rocket Engine Test Stand and a Chemical Steam Generator (CSG) test article; and validated during operational testing. The CSG test program is a risk mitigation activity to support building of the new A-3 Test Stand, which will be a highly complex facility for testing of engines in high altitude conditions. The foundation of the ISHM capability are knowledge-based integrated domain models for the test stand and CSG, with physical and model-based elements represented by objects – the domain models enable modular and evolutionary ISHM functionality.

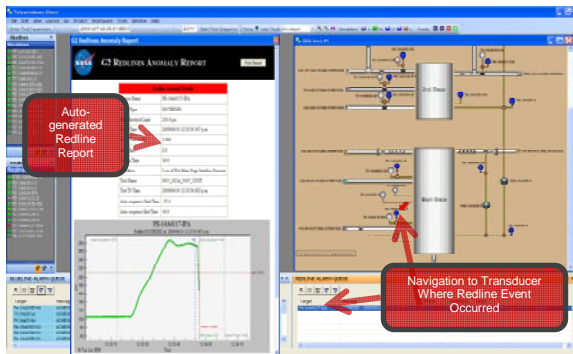


Figure 1. E-2/CSG Operational Pilot ISHM Implementation at NASA Stennis Space Center.